

Claims

1. Actuator unit with
 - a tube spring (32);
 - 5 - a piezoelectric actuator (31), that is inserted into the tube spring (32),
 - a first cap (33), that is connected to the tube spring (32) at a first free end (34) of the tube spring (32) and which is adjoined by the piezoelectric actuator (31),
 - 10 - a tube-shaped body (38), that is connected to the tube spring (32) by joining and is arranged in the area of a second free end (35) of the tube spring (32), and
 - a means for pretensioning, that is supported by the tube-shaped body (38) and pretensions the piezoelectric actuator
 - 15 (31).
2. Actuator unit according to claim 1, with a body (37), that comprises a disc-shaped part (371), which is inserted into the tube spring (32) between the piezoelectric actuator (31)
- 20 and the tube-shaped body (38) and which is influenced by the means for pretensioning.
3. Actuator unit according to claim 2, with the body (37) being a bolt-shaped body.
- 25 4. Actuator unit in accordance with one of the preceding claims,
characterized in that
there is a thread in the tube-shaped body (38), that the pretensioning means is a screw that is screwed into the thread.
- 30 5. Actuator unit in accordance with one of the preceding claims,
characterized in that
35 the bolt-shaped body is spherically shaped on its shaft side.

6. Actuator unit in accordance with one of the preceding claims,

characterized in that

5 the tube-shaped body (38) has a jump (381) in its diameter on its outer circumference.

7. Actuator unit in accordance with one of the preceding claims,

10 characterized in that

the tube-shaped body (38) is joined to the tube spring (32) by welding.

8. Method for manufacturing an actuator unit, which comprises
15 the steps of

- joining a first cap (33) with a tube spring (32) on a first free end (34) of the tube spring (32),
- inserting a piezoelectric actuator into the tube spring (32),

20 - arranging a tube-shaped body (38) in the area of a second free end (35) of the tube spring (32) and connecting the tube spring (32) by joining and

- inserting a pretensioning means, that is supported by the tube-shaped body (38) and pretensions a piezoelectric actuator (31).

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9. Method in accordance with claim 8

characterized in that

30 after inserting the piezoelectric actuator (31) into the tube spring (32) a body (37) is inserted, that comprises a disc-shaped part (371), into the tube spring (32) from the side of the second free end (35).